

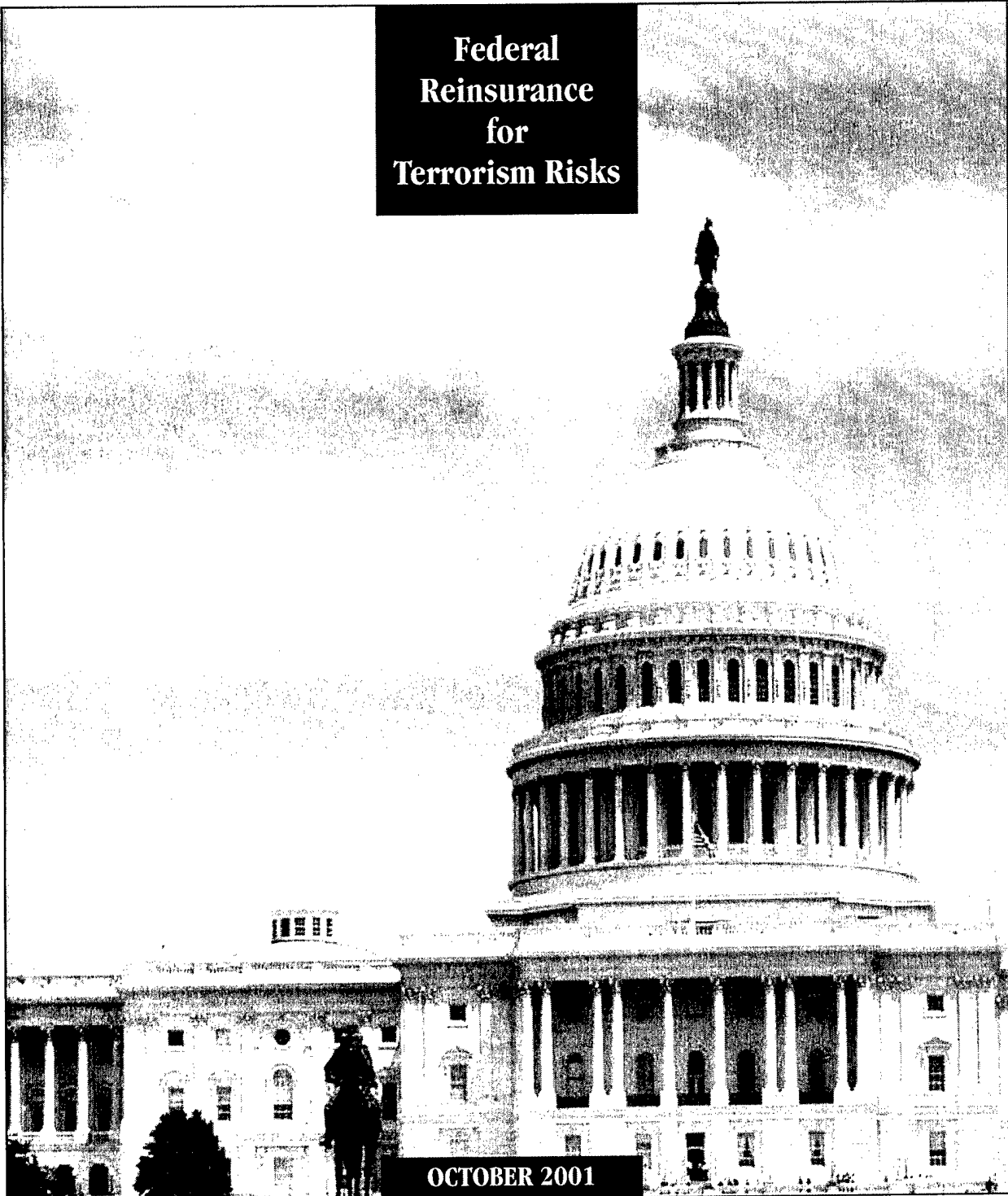
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**Federal  
Reinsurance  
for  
Terrorism Risks**



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**FEDERAL REINSURANCE FOR TERRORISM RISKS**

**October 2001**

The Congress of the United States  
Congressional Budget Office

## PREFACE

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This Congressional Budget Office (CBO) paper analyzes proposals for federal reinsurance of risks from terrorism. Marvin Phaup and David Torregrosa wrote the paper under the direction of Roger Hitchner. Many individuals deserve the authors' thanks. Ron Feldman of the Minneapolis Federal Reserve; Rade Musulin, Vice President of the Florida Farm Bureau Insurance Companies; and Richard Roth, a consulting actuary, reviewed earlier versions of this paper. Barry Anderson, Perry Beider, Kim Cawley, Bob Dennis, Arlene Holen, Kim Kowalewski, Debbie Lucas, Angelo Mascaro, Debbie Clay-Mendez, David Moore, and Tom Woodward, all of CBO, also commented.

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John Skeen edited the paper, and Kathryn Winstead prepared the manuscript for publication. Annette Kalicki prepared the electronic copies for the CBO Web site.



Dan L. Crippen  
Director

October 2001

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## INTRODUCTION AND SUMMARY

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The September 11 attack on the World Trade Center had three important effects on property and casualty insurance. It imposed severe losses on insurers; it indicated heightened risks from terrorism; and it created substantial uncertainty about those risks. Although the financial losses are unprecedented, most insurers are able to absorb those charges and pay insured claims. And, in a few years, the industry is likely to recover fully.

The financial policy alarm from this event, therefore, stems from the threat to the economy rather than from the insurance industry. Increased uncertainty about the risks from terrorism will reduce the willingness of insurers to provide coverage against that hazard—some insurers have already dropped coverage or instituted huge price increases. Without commercial insurance, owners, lenders, and users of high-risk properties will attempt to reduce their exposure to losses. For example, lenders may refuse to advance credit for the construction of uninsured buildings, plants, and transportation facilities, resulting in construction delays and stoppages. Owners of existing uninsured businesses may cut back on operations and shut down some facilities. If uncertainty leads to exaggerated estimates of the risks, economic activity will be curtailed and efforts to mitigate losses will be excessive. The result could be significant losses of income and production.

Since September 11, a sharp reduction in the availability of property and casualty insurance has been reported, and the pace of economic activity appears to have declined. To avoid an overreaction to the uncertainty and a contraction of economic activity, the Congress is considering proposals to increase the supply of insurance against losses from terrorism by taking on a large portion of the primary insurers' risks (through reinsurance).

Currently, no one knows how much of an increase in insurance is needed. If the risks and costs of some activities and facilities are significantly higher now than in the past, then economic behavior should change to reflect that increase in costs. The new level of risk needs to be taken into account in decisions about the design, location, construction, and use of economic infrastructure. It should also be incorporated into decisions about mitigating risks for existing facilities. At the same time, insurance spreads risks that would be of catastrophic proportion if borne by individual entities. If insurance markets are unable to function, government provision of some coverage can make the economy better off.

The circumstances that call for a federal role in the insurance markets also present the need for a difficult balance. If the federal government provides too much insurance, the private response to the increase in risk will be too small. Alternatively, if public policy results in too little insurance, private adjustment will be excessive. Because the true risk is unknown, finding the right middle ground will test policymakers' judgment.

In the proposals the Congress is now considering to increase the supply of terrorism insurance, the government would be taking on most of the short-term risks. The Congressional Budget Office offers three observations that may be useful in evaluating and modifying those proposals.

First, some evidence suggests that the current disruption in insurance markets is temporary. Following previous natural catastrophes, the supply of private insur-

ance fell sharply and insurance prices rose. Reduced coverage and higher prices had a variety of economic effects, including increased self-insurance and declines in risky activity. After several years, the supply of insurance recovered once the industry had improved its ability to assess and price new hazards.

Second, a temporary federal reinsurance program could reduce the short-term effects on the economy of the current reduction in the supply of insurance, even if such a reduction was not permanent. Federal coverage of losses from terrorism would expand the supply of insurance in the near term and hold down rates in the primary market. Moreover, the current case may differ from previous catastrophes in that losses from terrorism may be more difficult to predict than the costs of natural disasters. If so, the period in which private insurance is in short supply may be lengthy. Subsidized federal reinsurance would also spread the costs of the threat of terrorism across the entire country, rather than leaving those costs to be borne by the owners and users of particular facilities.

Third, the downside of federal efforts to increase the supply of insurance is that they would probably retard the private sector's adjustment to the increased risks and preempt a long-term increase in the supply of private insurance. Adverse effects on private mitigation and loss avoidance would be likely in markets in which the federal reinsurance was expected to be available indefinitely at low prices. Federal reinsurance is also likely to be more costly to taxpayers than private insurance would be to insurers. Those adverse effects could be minimized if the federal program had a firmly limited life, if federal premiums bore a reasonable approximation to the risks, and if private insurers would be required to bear initial losses and share in losses above a deductible.

## THE CHALLENGE OF TERRORISM FOR INSURANCE

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For insurance to be readily available, losses must be predictable. But predictability is required only in the aggregate. It is sufficient to know that  $x$  houses will be destroyed by fire or that  $y$  vehicles will be damaged in accidents or that  $z$  earthquakes or hurricanes will occur in a specified period. Terrorism, by contrast, is intended to be unpredictable. Acts of terror are discrete, willful, and strategic acts of destruction. The September 11 attacks have created sufficient uncertainty about future losses that some analysts believe terrorism is currently an uninsurable risk.

Not every new risk has proved to be uninsurable. For example, the changing legal environment for product liability, which makes predicting losses difficult, has affected how insurers manage such risks, but it has not resulted in insurers' dropping all product liability coverage. Rather it has produced a combination of more restricted coverage, shared responsibility, and modifications in producers' behavior. In addressing terrorism, Israel provides insurance for direct property damages from acts of terrorism, but private insurers provide coverage for indirect losses, including business interruption claims.<sup>1</sup> The government's coverage is also subject to limitations. Whether the risks from terrorism in the United States could be similarly

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1. Statement of Thomas J. McCool, Managing Director, Financial Markets and Community Investment, General Accounting Office, before the Senate Committee on Banking, Housing, and Urban Affairs, published as General Accounting Office, *Terrorism Insurance: Alternative Programs for Protecting Insurance Consumers*, GAO-02-199T (October 24, 2001).

predicted and managed is simply unknown. Successful counter-terrorist policies would clearly speed the resurgence of the supply of private insurance. Measures that render hijackings less likely would help reduce the risk of repeating the events of September 11. But until the effects of those measures are known, the expected magnitude of losses from terrorism will be subject to huge uncertainty for insurers, owners and users of vulnerable properties, and the government.

### The Response of Insurance Markets to Natural Catastrophes

The financial losses from the recent attacks will probably be the largest ever for a single event in the United States. Current estimates put losses above \$30 billion.<sup>2</sup> The losses will be shared about equally by primary insurers and reinsurers (firms that provide insurance for primary insurance companies). According to Standard & Poor's, losses from the Trade Center bombings would have to exceed \$50 billion before they would threaten the solvency of the insurance system.<sup>3</sup> However, the rating agencies have downgraded the credit ratings of several insurance companies.<sup>4</sup> Clearly, the capacity of U.S. insurers has been reduced.

The insurance markets' reaction to Hurricane Andrew, the costliest prior disaster, provides some indication of how insurers are likely to react to current losses. Andrew, which hit south Florida in August 1992, caused \$15.5 billion in insured losses. Reinsurance rates rose 75 percent between January 1992 and July 1994.<sup>5</sup> Those rates rose because the losses reduced the capacity of the reinsurance industry to supply coverage and because insurers raised their expectation of losses under existing coverage. Primary insurers and state regulators appealed unsuccessfully to the Congress to adopt a federal reinsurance program to reduce prices and increase the availability of insurance.<sup>6</sup>

Within five years, the insurance industry had largely recovered from Andrew (and from the Northridge earthquake, which occurred a year and a half after Andrew). Property and casualty insurers reported a combined surplus—net worth

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2. Statement of Matthew C. Mosher, Group Vice President, A.M. Best Company, before the House Committee on Financial Services, September 26, 2001. As of October 2, 2001, industry estimates ranged from \$30 billion to \$70 billion. Also see, David Pilla, "The Cost of Terror," *Best's Review*, October 2001.

3. Losses above that level would impair the credit quality of a number of companies. Standard & Poor's, "World Trade Center Attack Will Not Cripple Insurance Industry," *Ratings Direct*, September 14, 2001.

4. One rating agency also stated that the "overwhelming majority of these insurers and reinsurers are expected to maintain secure financial strength ratings." See Standard & Poor's, "S&P Takes Rating Actions on Insurers with World Trade Center Exposures" (press release, New York, N.Y., September 20, 2001).

5. Reinsurance expands the primary insurer's ability to write policies by creating a secondary market in which the risk of losses (and premiums) can be put without an increase in capital requirements for the primary insurer. Other reasons for an insurer to purchase reinsurance include the following: (1) to spread catastrophic losses, (2) to protect against specific risks, (3) to stabilize losses and smooth volatility, and (4) to gain a partner with specialized knowledge of large or complex risks. Statement of Ronald E. Ferguson, Chairman of General Re Corporation, before the House Committee on Financial Services, September 26, 2001.

6. Examples included H.R. 21, Homeowners' Insurance Availability Act of 1999; H.R. 219, Homeowners' Insurance Availability Act of 1998; H.R. 230, Natural Disaster Protection and Insurance Act of 1997; and H.R. 1956, the Natural Disaster Protection Act. None became law.

plus reserves—of \$300 billion at the end of the first quarter of 2001. National and international reinsurers reported a combined capacity—the amount available to pay claims—of about \$65 billion for catastrophes. Both levels are about double the capacity that existed before Andrew.

On the basis of past experience, severe short-term disruptions in the supply of property and casualty insurance are expected. Since the attacks, some insurers have reduced their coverage for terrorists' attacks from \$1.5 billion to \$50 million an airline per event for damage to people and property on the ground. A.M. Best reports that some recent reinsurance renewals have had premium increases of 60 percent to 70 percent for property catastrophe coverage.<sup>7</sup> Absent federal intervention, the short-term choice for commercial properties is no (or very limited) coverage at high prices, with possible federal assistance following an attack.

### The Effects of Reduced Insurance Coverage on the Economy

Withdrawal of U.S. and global reinsurers from the market would leave the risks of losses to be borne by the owners, creditors, and users of terrorists' targets. The reaction of uninsured businesses and individuals to the onset of risks from terrorism will be crucial in determining the effects of the loss of insurance on the economy.

Some risks will be shifted back to commercial property lenders, including banks and thrifts, in the form of higher default risks.<sup>8</sup> Those lenders may call some of their loans or, more likely, negotiate different loan covenants. The lack of coverage could also dampen new commercial construction and reduce other forms of business activity.

If private decisionmakers were reacting to an informed assessment of the increase in risk, there would not be a need for government to intervene. That is, if the risks from terrorism were understood, decisions about lending, capital formation, and the use of existing capital could efficiently incorporate the new information about those risks. But in the absence of knowledge about risk levels, decisions may be substantially overweighting the probability and severity of future losses.

### GOVERNMENT-BACKED REINSURANCE PROPOSALS

A federal reinsurance program would initially expand the supply of reinsurance and consequently lower prices in the primary market for terrorism insurance. Indeed, in the short run, such a program might be the only way significant amounts of traditional insurance would be offered. At the same time, a federal program would dampen incentives for private mitigation of risks and could preempt private insurers from reentering the market in the future. In that sense, a federal reinsurance program could result in an "excess" amount of insurance in the short run.

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7. A.M. Best Co., "Insurance Industry to Make Changes Resulting from Terrorist Attacks," Best Wire Services, October 2, 2001.

8. At the end of the second quarter of 2001, commercial banks held nearly half of the commercial mortgages, and thrifts held about 6 percent. Insurance companies—primarily life insurers—held nearly 15 percent and issuers of asset-backed securities about 18 percent.



Adverse effects on private mitigation and risk bearing could be especially strong if the federal program was expected to continue indefinitely and if government insurance was priced too low. Yet the genuine uncertainty surrounding the likelihood, timing, and amount of losses from terrorism means that at present the “right” price of insurance is simply unknown. That uncertainty combined with the desire to keep rates “affordable” means that premiums for federal reinsurance would be more likely to be set too low rather than too high.

Two types of plans are currently under consideration. One, offered by the insurance industry, is based on the United Kingdom’s Pool Re and would create a permanent fund financed with premiums. The other is the Administration’s proposal, which would have a life of only three years, would operate without a fund, and would charge no insurance premiums.

### The United Kingdom’s Reinsurance Program

The British government created Pool Re as a reinsurer of last resort in 1993 after private reinsurers reduced their coverage for risks from terrorism following IRA bombings.<sup>9</sup> With Pool Re, which is mutually owned by participating insurers, primary insurers may reinsure their risks from terrorism for commercial property losses and losses from business interruption. Pool Re sets premiums based on the amount of insurance coverage, geographical location, and other risk factors, and the primary insurers set coverage limits. Pool Re must reinsure all offered policies. In turn, the British government reinsures Pool Re.<sup>10</sup> Once the pool’s reserves exceed \$1.5 billion, then it will pay to the government the greater of 10 percent of the net premiums remitted each year or a payment geared to the government’s past losses. At the beginning of 2001, its reserves were nearly \$1 billion.<sup>11</sup>

The government accepts liability for all the claims above Pool Re’s ability to pay. While the pool has had numerous claims, there has yet to be a draw on the Treasury or premiums paid to the British government. Dividends are paid to participants annually as long as each year there is an underwriting surplus—that is, as long as premiums exceed claims. The dividend is 10 percent of the annual underwriting surplus.

Pool Re has made terrorism insurance widely available though some commercial properties have decided to self-insure. Rates have been sharply reduced as the IRA terrorist activity dropped; no claims have occurred since mid-1996.<sup>12</sup>

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9. For a more detailed description of Pool Re, see United Nations Conference on Trade and Development, *Comparative Examples of Existing Catastrophe Insurance Schemes*, September 29, 1995.

10. When a reinsurer transfers risks to other reinsurers, the transaction is termed a “retrocession.”

11. Tillinghast-Towers Perrin, “Pool Re and Terrorism Insurance in Great Britain,” October 2001, available at [www.towers.com/towers/services\\_products/Tillinghast/update\\_pool\\_re.pdf](http://www.towers.com/towers/services_products/Tillinghast/update_pool_re.pdf).

12. Ibid.

Critics have raised several concerns about Pool Re.<sup>13</sup> First, premiums are crudely set. There are only two geographic zones—the commercial districts of all major cities, including London, and all other regions—and just a single adjustment for “target risk.”<sup>14</sup> Rate schedules for the cities are three to five times those for the other zone. “Target risk” is related to the target’s prominence and visibility. Buildings in London determined to be high-risk are assessed an extra premium of 50 percent. Second, the premiums do not include any risk loads to compensate taxpayers for the risks that they accept.<sup>15</sup> Third, the government discourages risks from being diversified internationally by creating strong incentives for British insurers to reinsure only with Pool Re, thus retaining all terrorism risk within the country, which may be an insufficiently diversified pool. Fourth, the program initially offered no incentives for risk mitigation. Companies that installed security cameras or hired extra guards, for example, were not able to share in the lowered risk through reduced premiums. That policy has now been changed, and discounts for risk reduction are now available.

### The Administration’s Proposal

The Administration proposes that the federal government directly reinsure losses from terrorism for the next three years in a shared public-private program.<sup>16</sup> Consistent with the temporary nature of the program, the federal government’s share of the total risk declines over the program’s three-year life. In 2002, the government would take on 80 percent of the first \$20 billion of insured losses from terrorism and 90 percent of the losses above \$20 billion. There would be no deductible for private insurers. The primary insurers would therefore be responsible for 20 percent of the first \$20 billion in losses and 10 percent of the rest.

In 2003, private insurers would bear the first \$10 billion in losses. Losses between \$10 billion and \$20 billion would be shared equally. The federal government would continue to shoulder 90 percent of losses over \$20 billion.

In 2004—the last year of the program—private insurers would absorb the first \$20 billion in losses. The government and private insurers would share equally losses between \$20 billion and \$40 billion. Losses over \$40 billion would be split 90 percent to the federal government and 10 percent to the private insurers.

The Administration plan limits the total public-private liability to \$100 billion annually, though it is not likely that the government could ignore losses in excess of that ceiling. Thus, the maximum losses that the industry would be exposed to would be \$12 billion the first year, \$23 billion the second year, and \$36 billion the

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13. William B. Bice, “British Government Reinsurance and Acts of Terrorism: The Problems of Pool Re,” *Comment University of Pennsylvania Journal of International Business Law*, vol. 15, p. 441, 1994.

14. A different program covers Northern Ireland. The government directly reimburses losses from terrorism and does not assess any premiums.

15. In fact, the British government is explicitly subsidizing Pool Re through a 3 percent tax on all household and vehicle policies. The larger subsidy is implicit.

16. The White House, Office of the Press Secretary, “Background Briefing by Senior Administration Officials on Terrorism Insurance” (October 15, 2001).

third year. Should losses exceed those amounts, the Secretary of the Treasury could submit a request to the Congress for guidance on how any losses over the limit should be paid. A similar mechanism exists under the 1954 Price-Anderson Act, which limits the liability exposure of commercial nuclear power plants.<sup>17</sup>

Under the Administration's plan, the government would charge no premiums for the terrorism risks being borne by taxpayers. Treasury would pay claims directly to private insurers after the Secretary determined that an act of terrorism had occurred. Only property and casualty lines of insurance would be covered, and punitive damages would be excluded. The Administration has emphasized two features of its proposal: it would be explicitly temporary, and it would be simple. The Treasury would simply write checks for the amounts due following losses from an act of terrorism. The proposal avoids federal regulation of insurance companies, which are currently regulated by the states.

### Avoiding the Most Significant Pitfalls of Federal Reinsurance

Either proposal would enable the government to ensure the continued availability of insurance and avoid a destructive shock to the economy. Such a policy could also provide time for private adjustment—for insurers to more accurately assess and price risks from terrorism and for innovative risk-sharing agreements to develop. Increasing insurance coverage could also reduce the need for federal relief following a catastrophe.

The federal government could take several steps to reduce adverse effects of its reinsurance. First, limiting the life of a federal reinsurance program would avoid discouraging market adjustments to the risks from terrorism, including private mitigation and private reinsurance capacity.<sup>18</sup> As long as insurance was expected to be available at low prices, desirable private-sector responses to the increase in risk would be delayed. In the future, actuaries might be able to better assess terrorism risks for insurers and also provide private capital suppliers with credible forecasts of those risks. Insurance and capital markets are dynamic; their innovative solutions have the best potential to control costs and allocate risks. Most reinsurance contracts expire after six months to 12 months, so creating a one-year provisional program is an option. Committing the federal government to a permanent federal reinsurance program could result in a government monopoly.

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17. The industry's exposure is currently limited to about \$9.5 billion. The law requires commercial nuclear power plants to purchase private coverage for the first \$200 million in losses. Postevent assessments on all 106 commercial nuclear plants of up to \$833.9 million each (and a 5 percent surcharge) would fund the remaining coverage. Congressional action would be needed if losses exceeded the limit. That funding mechanism has never been tested by an event.

18. Some degree of preemption might occur regardless. If commercial property owners expected federal assistance after a terrorist attack, they might forgo terrorism coverage and reduce efforts to mitigate risks. Primary insurers might reach similar judgments and refrain from purchasing reinsurance for losses from terrorism. The federal government has covered some uninsured losses for individuals who chose not to purchase flood and crop insurance, for example.

Second, charging premiums for federal insurance could be desirable to encourage private adjustment to risks. Others have argued against that practice on the grounds that the short-term effects of unpriced insurance would be small and that such insurance would avoid creating a federal entity to set premiums and hold funds for future claims. If the government did charge premiums, it should set them as close as possible to the expected losses. While a statistical basis for estimating risks is absent, some judgments can be made about relative risks. For example, the minimum federal premium for coinsurance could be based on the rates private insurers charge for their limited coverage. To ensure that private insurers reentered the market, the government could also mark up premiums (add risk loads) above expected losses. Escalating federal rates would also facilitate the federal government's exit from the market.

Third, sharing risks from terrorism with private insurers would preserve incentives for developing sound underwriting policies and monitoring claims payments. Sharing those risks includes setting deductibles and requiring coinsurance. Keeping some level of risks with the private insurers would be essential to controlling federal costs. Unless there were significant coinsurance provisions, the federal government could end up paying inflated claims. In particular, the claims-adjustment process is more complex and litigious for business interruption losses and individuals' compensation losses. Whether a federal program would cover those insurance lines is undetermined.

#### Alternative Policies

The policy choices facing the Congress are broader than federal reinsurance. Two possibilities are to change the taxation of insurance reserves and enacting ceilings on liability for losses to terrorism.

Changing the taxation of reserves for expected losses from disasters, like other possible methods of decreasing the costs faced by insurers, would tend to expand the amount of insurance available at a given price. One possibility would be to allow firms to set aside the tax-free reserves for expected future losses. Such a change might encourage insurers to increase reserves against future losses, improve insurers' financial health, and expand the availability of insurance for catastrophic losses. But it would not address the problem that underlies the current reluctance to provide insurance for terrorism risks at any price: the inability to assess risk well enough to price policies.

A different approach to increasing the viability of privately provided insurance would be to limit the liability of companies, and therefore insurers, for losses from terrorists' attacks. Such restrictions could stand alone or could be combined with other policies. For instance, the government could limit the maximum awards for third-party damages or the awards for economic loss and pain and suffering associated with death benefits. Such restrictions would reduce some of the uncertainty associated with the potential size of claims. Still, considerable uncertainty would remain about the probability of attacks and the number of people likely to be affected. Although such limitations would make risk more manageable for insurers and firms, they would increase the risk borne by potential claimants and could reduce incentives to mitigate losses.



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